

## Short cuts

1. Use the reverse of the orientation sequence.

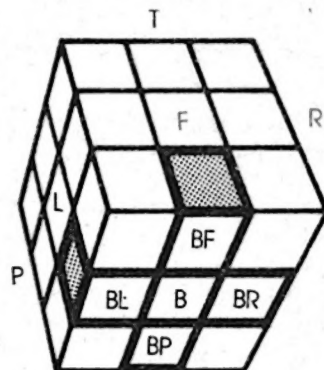
Orient bottom-corner cubes (reverse):  
B2 R- B2 R+ B+ R- B+ R+

whenever the BC2 pattern occurs. Use the forward sequence given above whenever the BC1 pattern occurs. This will usually eliminate 8 moves from the overall solution.

2. This shorter sequence exchanges two diagonal bottom-corner cubes as required in step 4C. It does not matter which face is the F face. Only the T and B faces must remain the same as always. Use this as a replacement for the sequence in step 4D.

F- B- R- B+ R+ F+

## STEP 5: BOTTOM EDGES (BF, BL, BP, BR)



BOTTOM FACE

The final step is to place and orient the 4 bottom-edge cubes. First check to see how many of these 4 cubes are already correctly positioned (without regard to orientation). At this point, there will be either 4, 1, or none of these bottom-edge cubes correctly positioned.

If none are correctly positioned, go to step 5A.

If 1 is correctly positioned, go to step 5B.

If 4 are correctly positioned, go to step 5C.

The sequences (L- R+) and (L+ R-) are done repeatedly in this step. They are put into parentheses for clarity.

- 5A. Do the following sequence (all 11 moves). It does not matter how the cube is held as long as the T and B faces remain as before.

“(L- R+) F+ (L+ R-) B2  
(L- R+) F+ (L+ R-)